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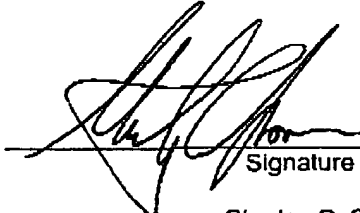
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| PRE-APPEAL BRIEF REQUEST FOR REVIEW | | Docket Number (Optional) |
|---|-------------------|--------------------------|
| | | SCS-540-542 |
| Application Number | Filed | |
| 10/518,898 | December 22, 2004 | |
| First Named Inventor | Greenway | |
| Art Unit | Examiner | |
| 2871 | N. Briggs | |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the <input type="checkbox"/> Applicant/Inventor <input type="checkbox"/> Assignee of record of the entire interest. See 37 C.F.R. § 3.71. Statement under 37 C.F.R. § 3.73(b) is enclosed. (Form PTO/SB/96) <input checked="" type="checkbox"/> Attorney or agent of record <u>27,393</u> (Reg. No.) <input type="checkbox"/> Attorney or agent acting under 37CFR 1.34. Registration number if acting under 37 C.F.R. § 1.34 _____</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.*</p> <p><input checked="" type="checkbox"/> *Total of 1 form/s are submitted.</p> | | |


Signature
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**STATEMENT OF ARGUMENTS IN SUPPORT OF
PRE-APPEAL BRIEF REQUEST FOR REVIEW**

The following listing of clear errors in the Examiner's rejection and his failure to identify essential elements necessary for a *prima facie* basis of rejection is responsive to the third non-final Official Action mailed December 21, 2007 (Paper No. 20071218).

It is noted that the Examiner admits that "the electro-optic switches of Caracci [U.S. Patent 6,563,973 cited in the previous Official Action] do not switch the inputs to another of the outputs" and presumably it was for this reason the Examiner dropped the previous rejection over Caracci. The Examiner should appreciate that the newly cited Leslie reference is very similar to the previously cited Caracci reference (in fact, Leslie is a co-inventor on the Caracci patent). Leslie's Figures 1-8 are identical to Caracci's Figures 1-7 and it is only the Leslie Figures 9 and 10 and their relevant description which is not present in the Caracci reference.

Therefore, as will be seen, the Leslie reference, like the Caracci reference, cannot disclose the subject matter of Applicants' independent claims 1 and 6.

Error #1. The Examiner fails to appreciate that Leslie fails to disclose the claim 1 "polarisation splitter device positioned between said waveguides"

Applicants' claim positively requires the interrelationship of the polarization splitter device and the waveguides. Leslie does not disclose that the polarization splitter device is positioned between the waveguides. Instead, Leslie teaches a polarization splitter device positioned within each of the waveguides, i.e., each waveguide has its own splitter device. This is identical to that taught in Caracci and therefore claim 1 is patentable over Leslie as well as Caracci.

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Error #2. The Examiner fails to appreciate that Leslie does not teach the claim 1 interrelationship of the waveguides "in the absence of activated first and second electro-optical switches" to transmit the refracted and reflected polarized components

A simple review of Leslie will show that all examples of waveguides (like those in Caracci) require a threshold voltage to be applied to several of the switches in order to enable the components of two light inputs to be directed towards two of the outputs. If the switches are not activated, i.e., no threshold voltage is applied, then the polarized components of the first light input will not be directed to the first light output.

Examples are clearly shown in Figure 1C of Leslie where a threshold voltage needs to be applied to four of the switches (two from group 35 and two from group 45) in order to permit Leslie's (and Caracci's) coupler to work. In Leslie's Figure 9 there is only one active input and one active output, but still two switches are needed to be activated in order to enable light entering input 1 to be directed to output 2. In Leslie's Figure 10 there is one active input and two outputs, but again four of the switches would need to be activated in order to allow this arrangement to work. Figures 9 & 10, not in Caracci, do not help the Examiner's rejection.

Applicants' claimed switchable coupler will direct the polarized components of the first light input to the first light output and polarized components of the second light input to the second light output even if no threshold voltage is applied and this arrangement is clearly specified in the fourth paragraph of independent claim 1. The absence of this claimed interrelationship in Leslie avoids any anticipation or obviousness rejection.

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Error #3. The Examiner fails to appreciate that Leslie does not teach the claim 1 first or second "electro-optical switch(es)"

Inasmuch as the Leslie electro-optic switches are the same as those disclosed in Caracci, the Examiner's admission that these switches are not present in Caracci would also apply to the Leslie reference.

Moreover, there is no disclosure in Leslie that when the first (or second) electro-optical switch is activated the polarized components of the first (or second) light input are switched to the second (or first) outlet port and conversely when the electro-optical switch remains passive (not activated) the polarized components of the first (or second) input are directed to the first (or second) outlet. In Leslie's arrangement, by the time light arrives at combiner 50, its outlet port has already been determined and combiner 50 will direct it to that pre-determined outlet port only. Altering the voltage across combiner 50 will not cause the light to exit by way of a different outlet port, as the determination of the outlet port has already been achieved by way of switches 30 and 40.

Because both of the specifically claimed first and second electro-optical switches of independent claim 1 are admittedly missing from the Caracci reference and are clearly missing from the similar Leslie reference, there is no support for any further rejection of independent claim 1 under 35 USC §102.

Error #4. The Examiner does not identify where Leslie teaches claim 6's two "transmitting" steps

Applicants' independent claim 6 requires the first and second steps of "transmitting" components to a first (or second) optical switch "for recombining" components of the first (or second) input and for switching "the recombined output from a first [or second] outlet to a

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second [or first] outlet.” Because the Examiner has previously admitted that the electro-optic switches of Caracci do not switch inputs to another of the outputs and because Leslie utilizes the same switches as Caracci as noted above, Leslie clearly cannot teach Applicants’ claimed first or second transmitting steps.

It should be understood that Leslie’s recombiner 50 does not act to switch outlets. As discussed in Leslie, the (TM) and (TE) components only are transmitted to switches 30 and 40 which do not act as recombiners but do determine the output channels. Therefore, as noted above, Leslie’s switches 30 and 40 do not correspond to the claimed first or second electro-optical switch.

Just as the switches were missing from the Leslie and Caracci references, neither of the “transmitting” steps can possibly be present in the Leslie reference.

Error #5. The Examiner fails to identify where Leslie teaches the claim 6 “selecting” step

Leslie does not disclose the final step in claim 6 of “selecting” operation of the switches to couple first and second inputs to an output group comprising the first and second outlet. This selecting step requires that each of the first and second inputs may be uncoupled or may be coupled to either of the first and second outlets.

Leslie’s teaching is only that the first input may be coupled to the second output or that the second output may be coupled to the first input, but does not disclose that both inputs may be coupled to one output. In fact, the apparatus taught by Leslie could not be reconfigured to achieve the claim 6 “selecting” step, even with 20/20 hindsight.

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Error #6. The Examiner fails to appreciate that the Leslie reference, just as the Caracci reference, fails to teach the invention of claims 1 and 6

The only difference between the references is the additional subject matter of Figures 9 and 10 in the Leslie patent. Figure 9 discloses a variable optical attenuator which only allows a part of the light entering input 1 to be transmitted to output 1. Figure 10 discloses a beam-splitter which causes the light entering input 1 to be split between two outputs. Neither of these figures in Leslie provide for coupling all the light entering two inputs into a single output.

SUMMARY

Independent claims 1 and 6 positively recite structures/method steps and interrelationships which are simply not present in Leslie. Leslie doesn't teach a splitter device "positioned between said waveguides" or that the waveguides are arranged such that in the absence of "activated first and second electro-optical switches" components of the first light input are reflected in the direction of a first output and similarly with second inputs and second outputs. Quite clearly, Leslie, like Caracci, does not teach the first and second "electro-optical switch." Because the Claim structures are not present in Leslie, it is impossible for Leslie to teach Applicants' two "transmitting" steps or the "selecting" step. Thus, there is no support for any anticipation of apparatus claim 1 or method claim 6.

As a result of the above, there is simply no support for the rejection of Applicants' independent claims 1 and 6 or claims dependent thereon under 35 USC §102. Applicants respectfully request that the Pre-Appeal Panel find that the application is allowed on the existing claims and prosecution on the merits should be closed.